

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P1356849

Luminaire Tested: 2ASL4-15HE-2-R63-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1356849
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-7)
Test Lab: INNOVATION CENTER
Issue Date: 2/17/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: 2ASL4-15HE-2-R63-UNV
Description: 2FT 1500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND R63 LEDS 2 ROW
Light Source: -
Ballast/Driver: -

Summary

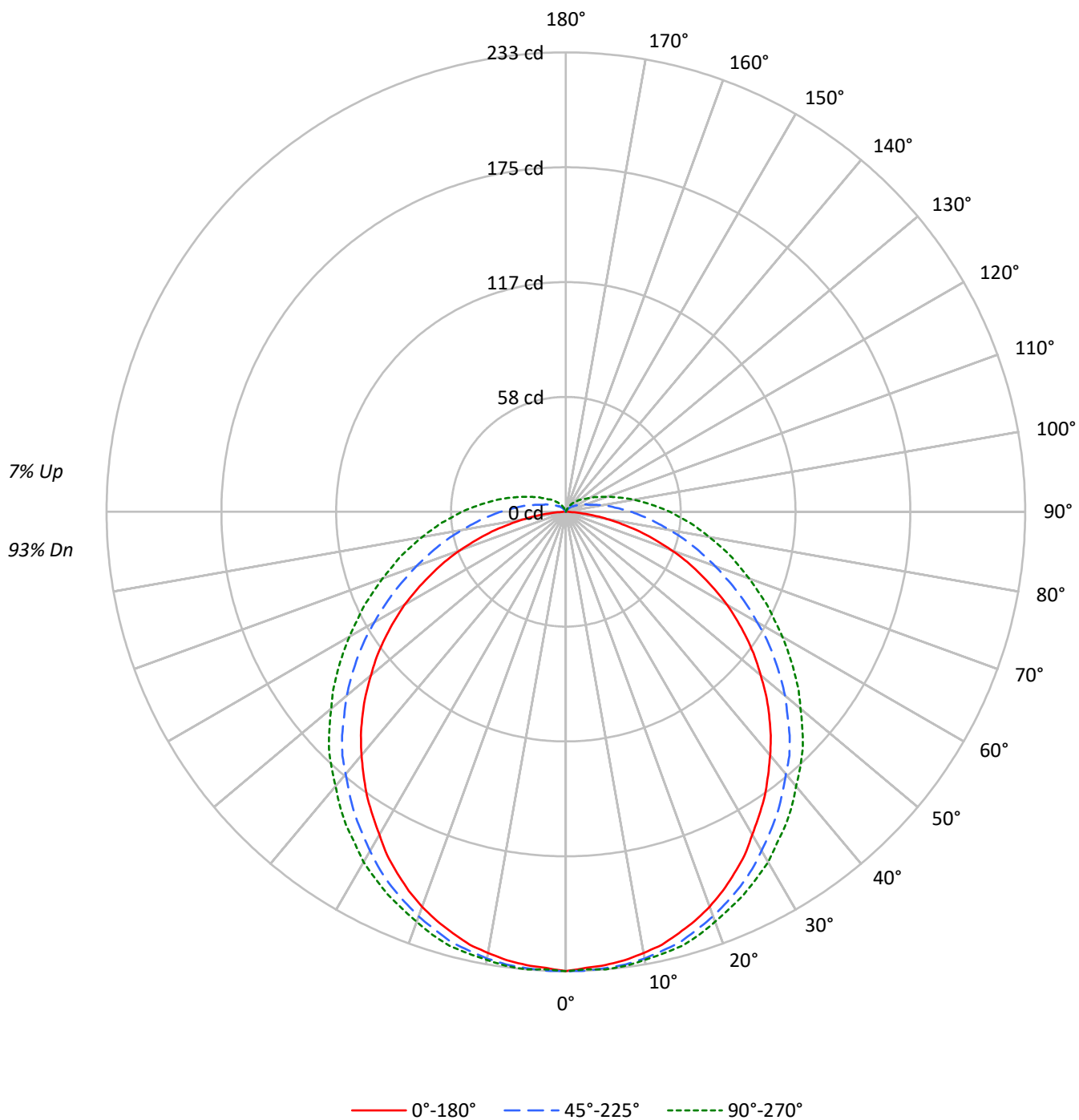
Lumens per Lamp: N/A
Luminaire Lumens: 800.0 lumens
Efficiency: N/A
Efficacy: 41.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.4
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 19.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P1356849

CATALOG NUMBER: 2ASL4-15HE-2-R63-UNV

Luminous Intensity Polar Plot



TEST NUMBER: P1356849

CATALOG NUMBER: 2ASL4-15HE-2-R63-UNV

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	95	95	93
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	65	70	66	63	63	63	60
3	86	75	66	59	83	73	65	58	69	62	56	65	59	55	62	57	53	53	53	50
4	79	66	57	50	76	64	56	49	61	54	48	58	51	46	55	49	45	45	45	42
5	72	59	50	43	70	57	49	42	54	47	41	52	45	40	49	43	39	39	39	36
6	67	53	44	37	64	52	43	37	49	41	36	47	40	35	44	39	34	34	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	30	30	28
8	58	44	35	29	56	43	34	29	41	33	28	39	32	28	37	31	27	27	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	29	24	24	24	22
10	50	37	29	24	49	36	28	23	35	28	23	33	27	22	32	26	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3802	3802	3802
5°	3763	3721	3715
10°	3730	3646	3624
15°	3686	3566	3552
20°	3632	3466	3450
25°	3555	3368	3363
30°	3458	3256	3275
35°	3379	3153	3174
40°	3288	3041	3066
45°	3196	2943	2989
50°	3081	2816	2874
55°	2966	2681	2781
60°	2826	2528	2685
65°	2619	2385	2610
70°	2384	2249	2538
75°	2044	2141	2517
80°	1541	2040	2508
85°	853	2014	2580

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3196 cd/sqm

TEST NUMBER: P1356849

CATALOG NUMBER: 2ASL4-15HE-2-R63-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.1	2.8
10°-20°	63.5	7.9
20°-30°	96.3	12.0
30°-40°	116.4	14.6
40°-50°	122.7	15.3
50°-60°	114.5	14.3
60°-70°	94.6	11.8
70°-80°	68.6	8.6
80°-90°	43.3	5.4
90°-100°	25.9	3.2
100°-110°	14.8	1.9
110°-120°	8.4	1.1
120°-130°	4.8	0.6
130°-140°	2.6	0.3
140°-150°	1.1	0.1
150°-160°	0.2	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	181.9	22.7
0°-40°	298.3	37.3
0°-60°	535.6	66.9
0°-90°	742.1	92.8
90°-120°	49.1	6.1
90°-150°	57.7	7.2
90°-180°	58.0	7.2
0°-180°	800.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	233	233	233	233	233	
5°	231	233	232	232	233	22
15°	221	224	226	226	228	62
25°	202	205	210	212	214	93
35°	176	180	187	192	194	110
45°	146	152	160	167	170	112
55°	112	119	129	138	141	100
65°	76	84	96	108	113	75
75°	39	49	67	81	86	41
85°	7	23	42	57	63	9
90°	0	14	33	47	53	0
95°	0	9	25	38	43	0
105°	0	3	14	24	28	0
115°	0	2	8	15	18	0
125°	0	1	5	10	11	0
135°	0	0	3	6	7	0
145°	0	0	2	4	4	0
155°	0	0	0	1	2	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

TEST NUMBER: P1356849

CATALOG NUMBER: 2ASL4-15HE-2-R63-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	233.0	233.0	233.0	233.0	233.0
2.5°	231.6	233.8	233.0	232.3	232.3
5°	230.8	233.0	232.3	232.3	233.0
7.5°	229.4	231.6	231.6	231.6	232.3
10°	227.2	230.1	230.1	230.1	230.8
12.5°	225.0	227.2	227.9	228.6	229.4
15°	221.3	224.2	225.7	226.4	227.9
17.5°	217.6	219.8	222.0	224.2	225.0
20°	213.2	216.2	218.4	220.6	221.3
22.5°	208.1	211.0	214.0	216.2	217.6
25°	202.3	205.2	209.6	212.5	214.0
27.5°	196.4	199.3	204.5	208.1	209.6
30°	189.1	193.5	198.6	203.0	205.2
32.5°	182.5	186.9	192.7	197.9	199.3
35°	175.9	180.3	186.9	192.0	194.2
37.5°	168.5	173.7	180.3	186.1	188.3
40°	161.2	166.3	173.7	180.3	181.7
42.5°	153.9	159.0	167.8	173.7	175.9
45°	145.8	151.7	160.5	167.1	170.0
47.5°	137.8	143.6	152.4	159.8	162.7
50°	129.0	135.6	145.1	152.4	155.4
52.5°	120.9	127.5	137.0	145.1	148.8
55°	112.1	118.7	129.0	137.8	141.4
57.5°	103.3	109.9	120.9	130.4	134.1
60°	94.5	101.1	112.1	123.1	126.8
62.5°	85.0	92.3	104.1	115.1	119.4
65°	75.5	83.5	96.0	107.7	112.9
67.5°	66.7	74.7	87.9	101.1	105.5
70°	57.2	66.0	80.6	93.8	98.9
72.5°	47.6	57.2	73.3	87.2	92.3
75°	38.8	49.1	66.7	80.6	86.5
77.5°	29.3	41.8	60.1	74.7	79.9
80°	21.3	34.4	53.5	68.9	74.0
82.5°	13.9	27.8	47.6	63.0	68.2
85°	7.3	22.7	42.5	57.2	63.0
87.5°	2.2	17.6	37.4	52.0	57.2
90°	0.0	13.9	33.0	46.9	52.8
92.5°	0.0	11.0	28.6	42.5	47.6
95°	0.0	8.8	24.9	38.1	43.2
97.5°	0.0	7.3	22.0	34.4	38.8
100°	0.0	5.9	19.1	30.8	35.2
102.5°	0.0	4.4	16.1	27.1	31.5
105°	0.0	2.9	13.9	24.2	27.8
107.5°	0.0	2.2	11.7	21.3	24.9
110°	0.0	2.2	11.0	18.3	22.0

TEST NUMBER: P1356849

CATALOG NUMBER: 2ASL4-15HE-2-R63-UNV

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	1.5	9.5	16.9	19.8
115°	0.0	1.5	8.1	14.7	17.6
117.5°	0.0	1.5	7.3	13.2	16.1
120°	0.0	1.5	6.6	11.7	13.9
122.5°	0.0	0.7	5.9	10.3	12.5
125°	0.0	0.7	5.1	9.5	11.0
127.5°	0.0	0.7	4.4	8.8	10.3
130°	0.0	0.7	4.4	8.1	9.5
132.5°	0.0	0.0	3.7	7.3	8.8
135°	0.0	0.0	2.9	5.9	7.3
137.5°	0.0	0.0	2.9	5.1	6.6
140°	0.0	0.0	2.2	5.1	5.9
142.5°	0.0	0.0	1.5	4.4	5.1
145°	0.0	0.0	1.5	3.7	4.4
147.5°	0.0	0.0	0.7	2.9	3.7
150°	0.0	0.0	0.7	2.2	2.9
152.5°	0.0	0.0	0.0	1.5	2.2
155°	0.0	0.0	0.0	0.7	1.5
157.5°	0.0	0.0	0.0	0.0	0.7
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1356849

CATALOG NUMBER: 2ASL4-15HE-2-R63-UNV

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	13.92	15.46	14.39	15.92	16.41	15.90	17.43	16.37	17.89	18.38
	3H	15.43	16.83	15.91	17.30	17.83	18.31	19.71	18.80	20.18	20.71
	4H	15.91	17.23	16.41	17.72	18.27	19.49	20.82	20.00	21.31	21.85
	6H	16.18	17.42	16.70	17.92	18.48	20.71	21.95	21.23	22.45	23.01
	8H	16.24	17.42	16.77	17.95	18.51	21.33	22.52	21.87	23.04	23.61
	12H	16.25	17.39	16.79	17.91	18.50	22.00	23.14	22.54	23.66	24.26
4H	2H	14.78	16.11	15.29	16.60	17.14	16.33	17.66	16.84	18.15	18.69
	3H	16.53	17.66	17.05	18.19	18.76	18.98	20.11	19.50	20.64	21.21
	4H	17.14	18.17	17.68	18.72	19.31	20.33	21.37	20.87	21.91	22.51
	6H	17.54	18.46	18.10	19.02	19.64	21.75	22.67	22.31	23.24	23.85
	8H	17.64	18.50	18.20	19.07	19.69	22.48	23.34	23.05	23.91	24.54
	12H	17.69	18.47	18.27	19.06	19.69	23.27	24.06	23.86	24.65	25.28
8H	4H	17.81	18.68	18.38	19.24	19.87	20.56	21.42	21.12	21.98	22.61
	6H	18.40	19.13	19.00	19.74	20.37	22.15	22.88	22.75	23.49	24.12
	8H	18.59	19.25	19.20	19.87	20.51	23.03	23.69	23.63	24.31	24.95
	12H	18.71	19.30	19.32	19.91	20.62	24.01	24.60	24.62	25.20	25.91
12H	4H	18.01	18.79	18.59	19.38	20.01	20.57	21.35	21.15	21.94	22.57
	6H	18.69	19.35	19.30	19.97	20.62	22.19	22.85	22.80	23.47	24.12
	8H	18.98	19.57	19.59	20.18	20.89	23.14	23.73	23.75	24.33	25.04

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-7

Test Date: 01/21/2026

Luminaire Tested: 4ASL-2-R630-UNV-OPL-1_600mA

Data in this report applies to families of products including 4ASL

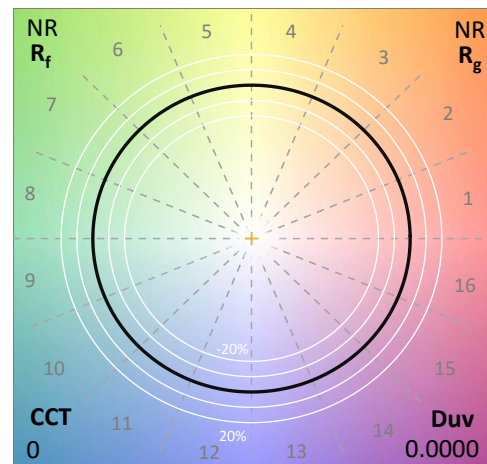
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2511-597-7
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 01/29/2026
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Fail-Safe
 Catalog Number: **4ASL-2-R630-UNV-OPL-1_600mA**
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND RED 630NM LEDS with 1 rows at 600mA

Spectral Parameters

CCT (K): 0
 CIE u' : 0.5395
 CIE v' : 0.5190
 Duv: 0.0000
 CIE x: 0.7004
 CIE y: 0.2995
 CIE z: 0.0001
 Peak Wavelength (nm): 638
 Dominant Wavelength (nm): 624
 Purity: 99.9862
 Rf: NR
 Rg: NR

CRI (Ra): 0.0
 R1: 0.0
 R2: 0.0
 R3: 0.0
 R4: 0.0
 R5: 0.0
 R6: 0.0
 R7: 0.0
 R8: 0.0
 R9: 0.0
 R10: 0.0
 R11: 0.0
 R12: 0.0
 R13: 0.0
 R14: 0.0
 R15: 0.0



Test Conditions

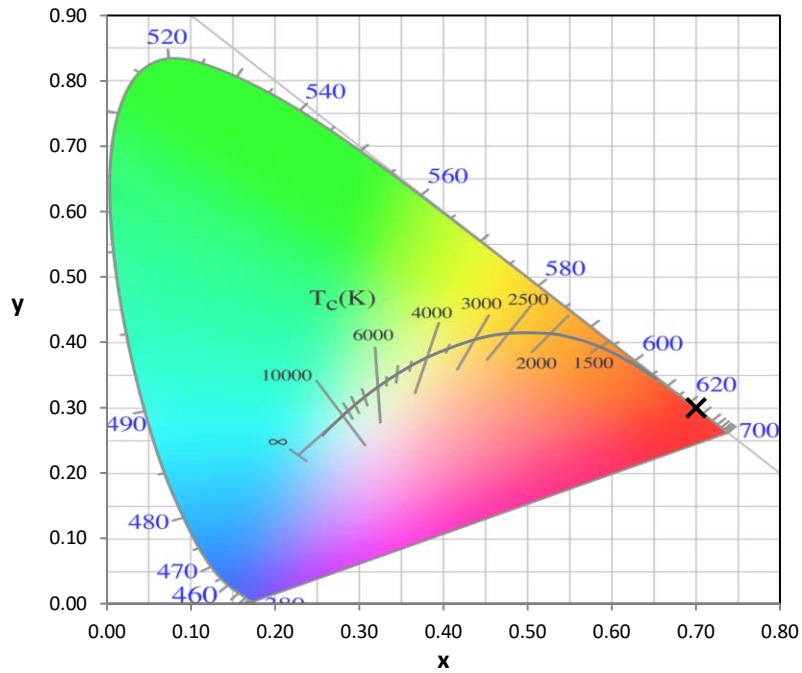
Stabilization Time: 69M
 Operation Time: 2H 9M
 Sphere Temperature (°C): 25.1

REPORT NUMBER: SP1-2511-597-7

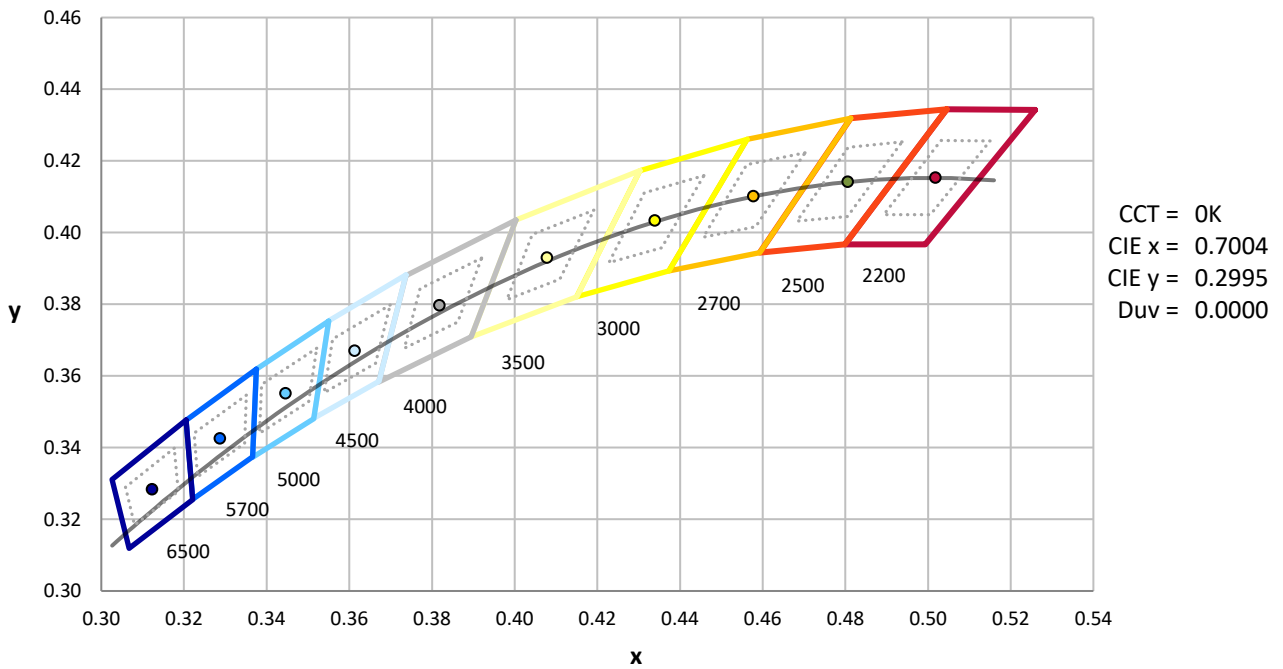
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	10/21/2025	10/21/2026
Sphere Thermometer	ONSET IN0085	10/21/2025	10/21/2026
Room Thermometer	ONSET IN0046	10/21/2025	10/21/2026

REPORT NUMBER: SP1-2511-597-7

CIE 1931 Chromaticity Diagram



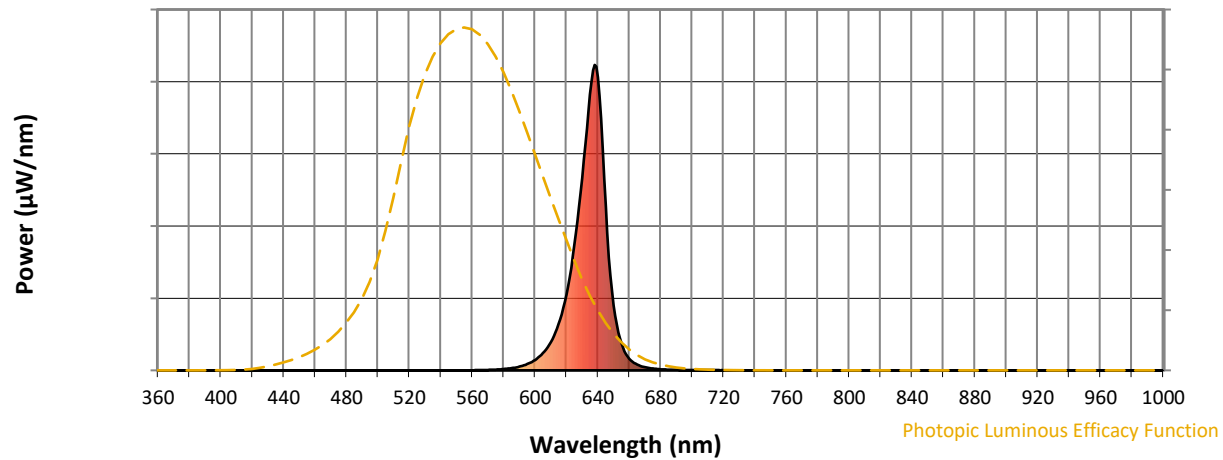
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



CCT = 0K
 CIE x = 0.7004
 CIE y = 0.2995
 Duv = 0.0000

REPORT NUMBER: SP1-2511-597-7

Photopic Flux vs. Wavelength

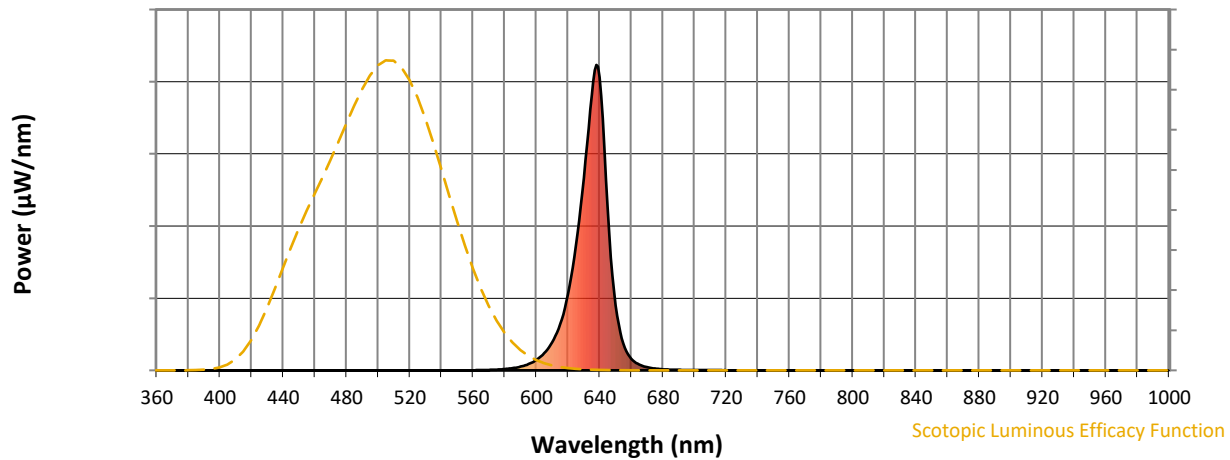


Photopic Lumens: NR

λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	0	NR	620	248	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	409	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	630	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	903	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	960	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	535	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	212	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	88	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	38	NR	790	0	NR	920	0	NR
405	0	NR	535	0	NR	665	19	NR	795	0	NR	925	0	NR
410	0	NR	540	0	NR	670	10	NR	800	0	NR	930	0	NR
415	0	NR	545	0	NR	675	6	NR	805	0	NR	935	0	NR
420	0	NR	550	0	NR	680	4	NR	810	0	NR	940	0	NR
425	0	NR	555	0	NR	685	2	NR	815	0	NR	945	0	NR
430	0	NR	560	0	NR	690	2	NR	820	0	NR	950	0	NR
435	0	NR	565	1	NR	695	1	NR	825	0	NR	955	0	NR
440	0	NR	570	2	NR	700	1	NR	830	0	NR	960	0	NR
445	0	NR	575	3	NR	705	1	NR	835	0	NR	965	0	NR
450	0	NR	580	4	NR	710	1	NR	840	0	NR	970	0	NR
455	0	NR	585	7	NR	715	1	NR	845	0	NR	975	0	NR
460	0	NR	590	12	NR	720	1	NR	850	0	NR	980	0	NR
465	0	NR	595	20	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	34	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	56	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	92	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	152	NR	745	0	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-7

Scotopic Flux vs. Wavelength



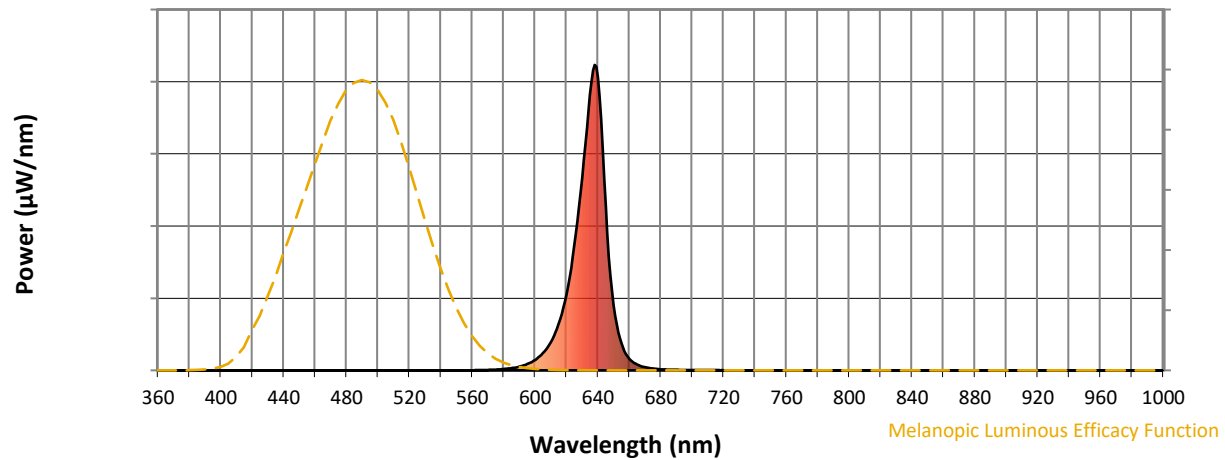
Scotopic Lumens: NR

S/P: 0.05

λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	0	NR	620	248	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	409	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	630	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	903	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	960	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	535	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	212	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	88	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	38	NR	790	0	NR	920	0	NR
405	0	NR	535	0	NR	665	19	NR	795	0	NR	925	0	NR
410	0	NR	540	0	NR	670	10	NR	800	0	NR	930	0	NR
415	0	NR	545	0	NR	675	6	NR	805	0	NR	935	0	NR
420	0	NR	550	0	NR	680	4	NR	810	0	NR	940	0	NR
425	0	NR	555	0	NR	685	2	NR	815	0	NR	945	0	NR
430	0	NR	560	0	NR	690	2	NR	820	0	NR	950	0	NR
435	0	NR	565	1	NR	695	1	NR	825	0	NR	955	0	NR
440	0	NR	570	2	NR	700	1	NR	830	0	NR	960	0	NR
445	0	NR	575	3	NR	705	1	NR	835	0	NR	965	0	NR
450	0	NR	580	4	NR	710	1	NR	840	0	NR	970	0	NR
455	0	NR	585	7	NR	715	1	NR	845	0	NR	975	0	NR
460	0	NR	590	12	NR	720	1	NR	850	0	NR	980	0	NR
465	0	NR	595	20	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	34	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	56	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	92	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	152	NR	745	0	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-7

Melanopic Flux vs. Wavelength

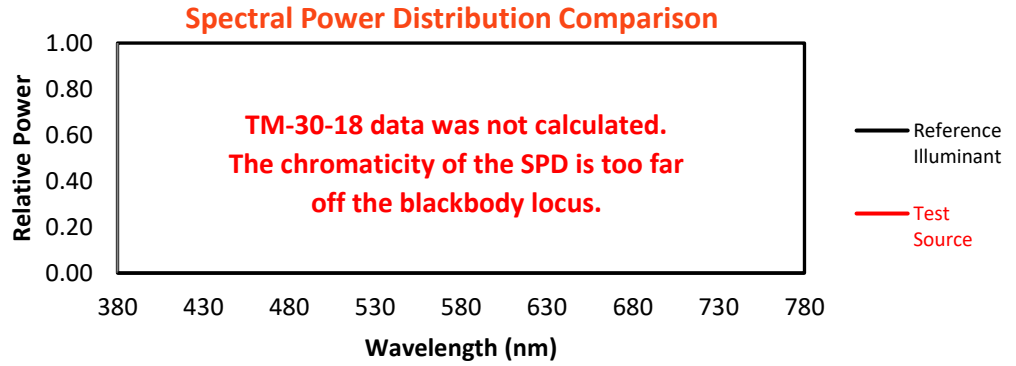
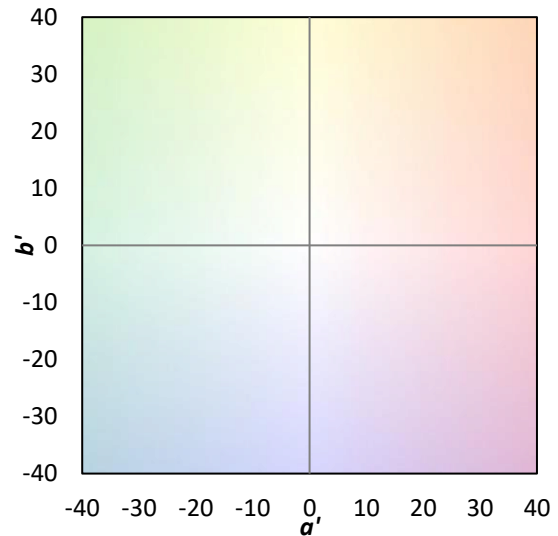
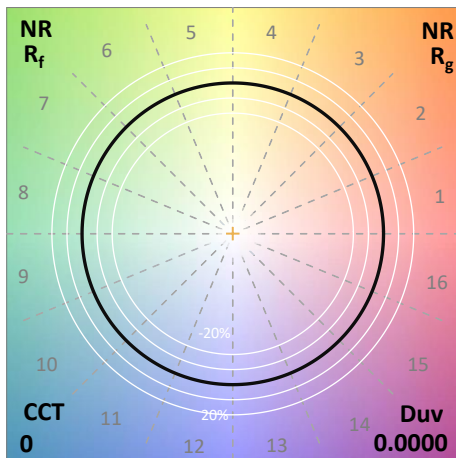
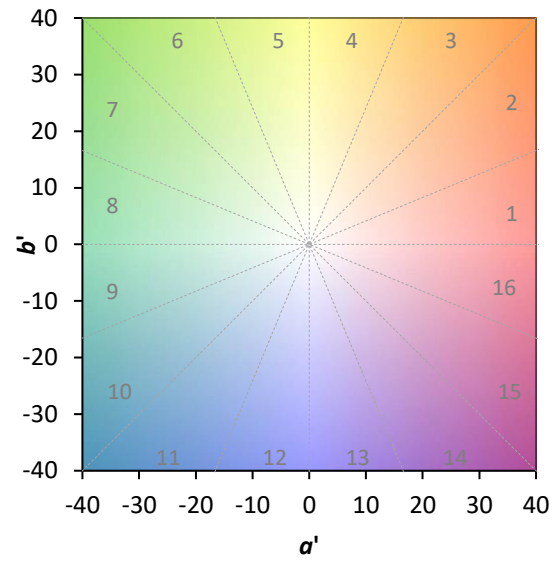
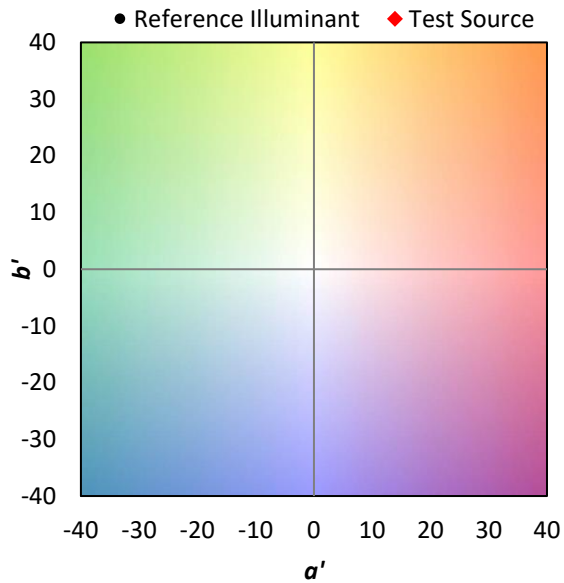


Melanopic Lumens: NR

M/P: 0.02

λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	0	NR	620	248	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	409	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	630	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	903	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	960	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	535	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	212	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	88	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	38	NR	790	0	NR	920	0	NR
405	0	NR	535	0	NR	665	19	NR	795	0	NR	925	0	NR
410	0	NR	540	0	NR	670	10	NR	800	0	NR	930	0	NR
415	0	NR	545	0	NR	675	6	NR	805	0	NR	935	0	NR
420	0	NR	550	0	NR	680	4	NR	810	0	NR	940	0	NR
425	0	NR	555	0	NR	685	2	NR	815	0	NR	945	0	NR
430	0	NR	560	0	NR	690	2	NR	820	0	NR	950	0	NR
435	0	NR	565	1	NR	695	1	NR	825	0	NR	955	0	NR
440	0	NR	570	2	NR	700	1	NR	830	0	NR	960	0	NR
445	0	NR	575	3	NR	705	1	NR	835	0	NR	965	0	NR
450	0	NR	580	4	NR	710	1	NR	840	0	NR	970	0	NR
455	0	NR	585	7	NR	715	1	NR	845	0	NR	975	0	NR
460	0	NR	590	12	NR	720	1	NR	850	0	NR	980	0	NR
465	0	NR	595	20	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	34	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	56	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	92	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	152	NR	745	0	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-7

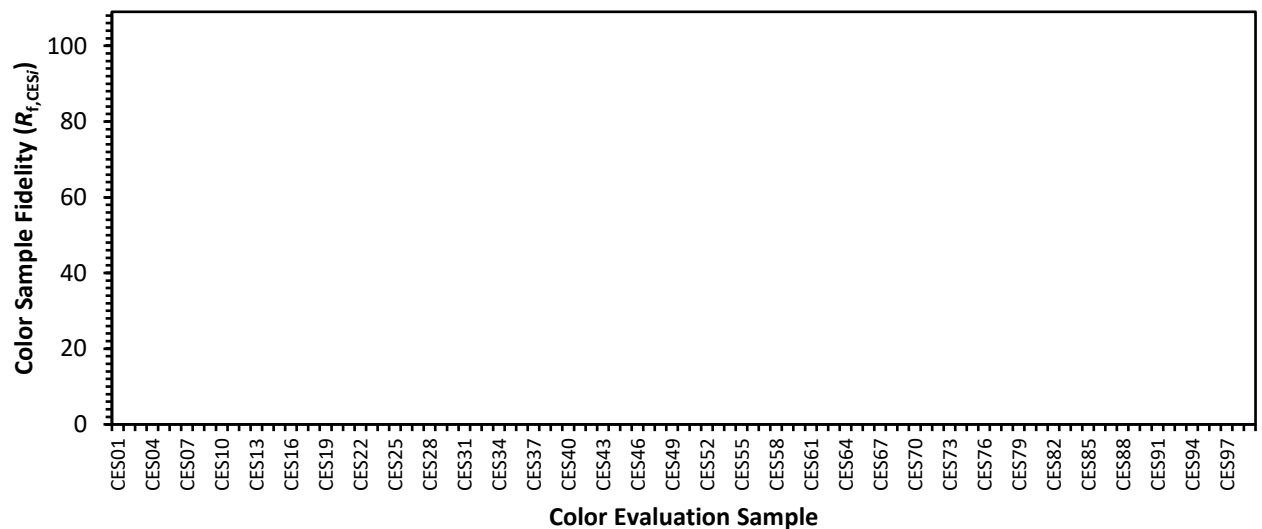
TM-30-18
Summary
 $R_f = 0$
 $R_g = 0$
 CIE $R_a = 0.0$
 $R_9 = 0.0$

Color Vector Graphics


REPORT NUMBER: SP1-2511-597-7

TM-30-18

Individual Sample Fidelity Index ($R_{f,i}$)

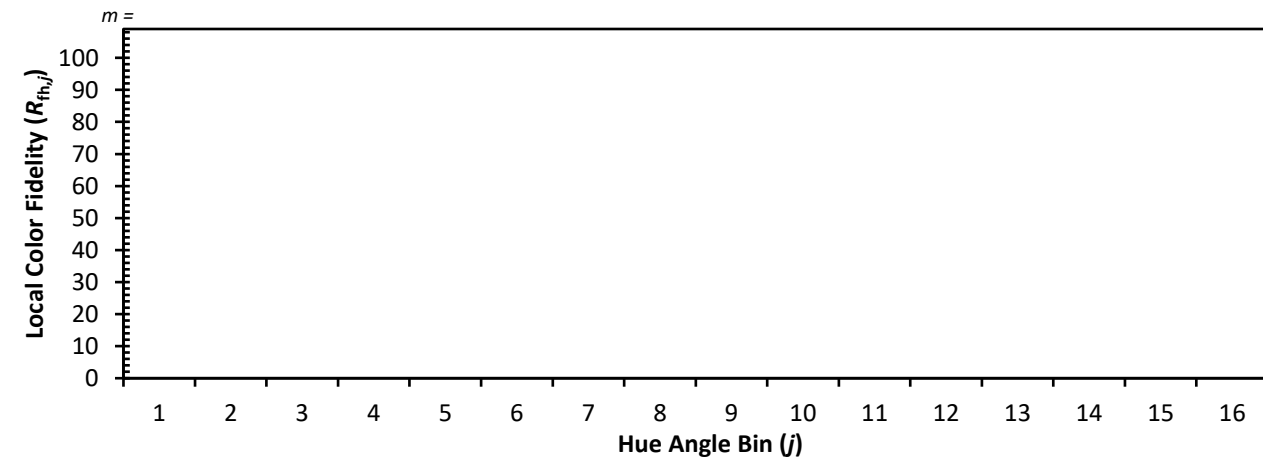
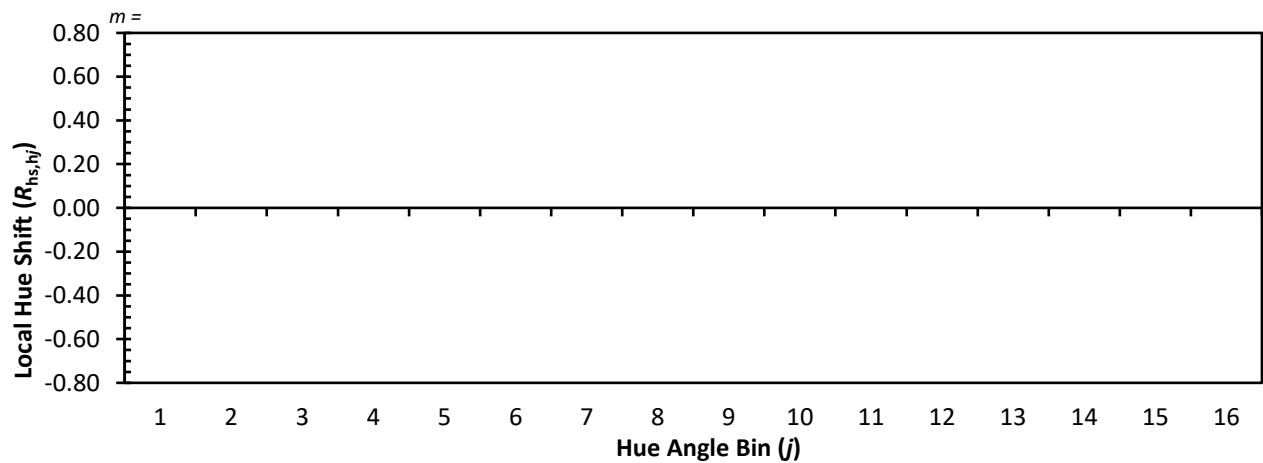
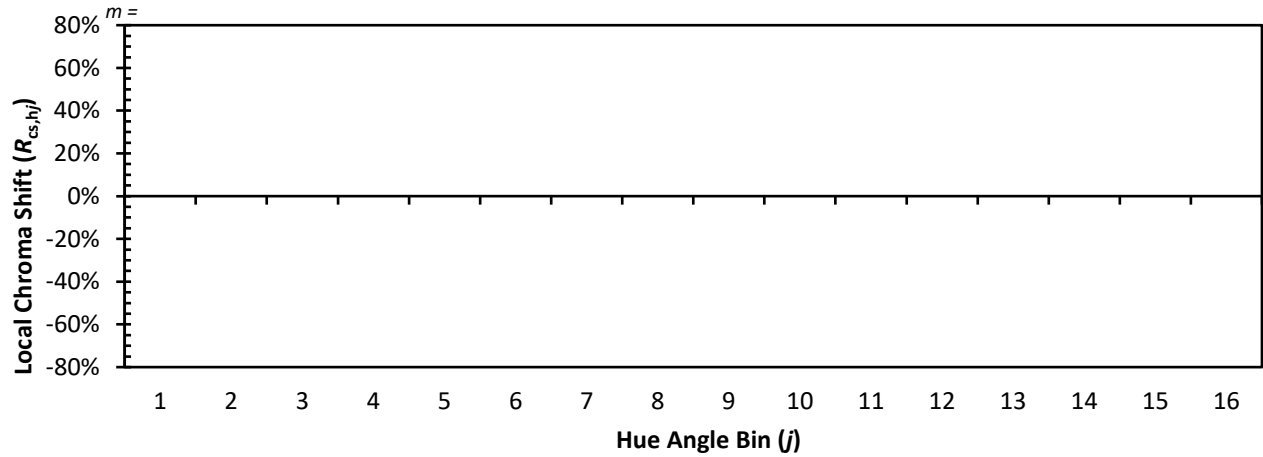
CES01 = 0	CES26 = 0	CES51 = 0	CES76 = 0
CES02 = 0	CES27 = 0	CES52 = 0	CES77 = 0
CES03 = 0	CES28 = 0	CES53 = 0	CES78 = 0
CES04 = 0	CES29 = 0	CES54 = 0	CES79 = 0
CES05 = 0	CES30 = 0	CES55 = 0	CES80 = 0
CES06 = 0	CES31 = 0	CES56 = 0	CES81 = 0
CES07 = 0	CES32 = 0	CES57 = 0	CES82 = 0
CES08 = 0	CES33 = 0	CES58 = 0	CES83 = 0
CES09 = 0	CES34 = 0	CES59 = 0	CES84 = 0
CES10 = 0	CES35 = 0	CES60 = 0	CES85 = 0
CES11 = 0	CES36 = 0	CES61 = 0	CES86 = 0
CES12 = 0	CES37 = 0	CES62 = 0	CES87 = 0
CES13 = 0	CES38 = 0	CES63 = 0	CES88 = 0
CES14 = 0	CES39 = 0	CES64 = 0	CES89 = 0
CES15 = 0	CES40 = 0	CES65 = 0	CES90 = 0
CES16 = 0	CES41 = 0	CES66 = 0	CES91 = 0
CES17 = 0	CES42 = 0	CES67 = 0	CES92 = 0
CES18 = 0	CES43 = 0	CES68 = 0	CES93 = 0
CES19 = 0	CES44 = 0	CES69 = 0	CES94 = 0
CES20 = 0	CES45 = 0	CES70 = 0	CES95 = 0
CES21 = 0	CES46 = 0	CES71 = 0	CES96 = 0
CES22 = 0	CES47 = 0	CES72 = 0	CES97 = 0
CES23 = 0	CES48 = 0	CES73 = 0	CES98 = 0
CES24 = 0	CES49 = 0	CES74 = 0	CES99 = 0
CES25 = 0	CES50 = 0	CES75 = 0	



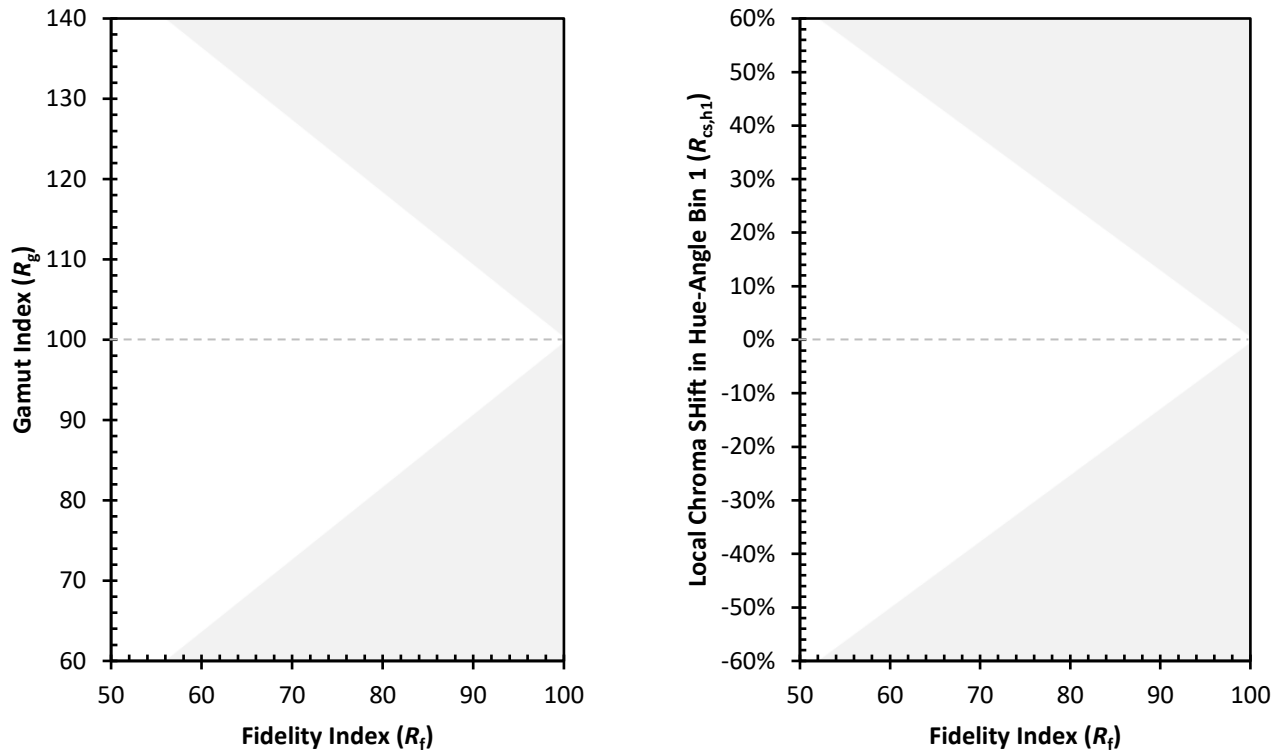
REPORT NUMBER: SP1-2511-597-7

TM-30-18

Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)